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[0610] All references cited herein are fully incorporated by reference. Having now fully described the invention, it will be understood by one of skill in the art that the invention may be performed within a wide and equivalent range of conditions, parameters and the like, without affecting the spirit or scope of the invention or any embodiment thereof

What is claimed is:

1. A method for preparing cells for treating a patient with cancer, comprising the steps:
   a) purifying T cells from a sample comprising leukocytes and platelets, wherein the leukocytes comprise T cells and wherein the T cells are purified by:
      i) performing a size based separation using a microfluidic device to produce an enriched product in which, compared to the sample, the percentage cells that are platelets has been reduced; and
      ii) in addition to the size based separation, performing an affinity based separation;
   b) after the purification of step a), activating and expanding the T cells to produce a composition in which the percentage of T cells that are central memory T cells has increased compared to the percentage of T cells that are central memory T cells in the sample;
   c) genetically engineering activated T cells to comprise therapeutic benefit in the treatment of said patient's cancer.

2. The method of claim 1, wherein, in step c), the activated T cells are genetically engineered to comprise modified cell surface receptors of therapeutic benefit in the treatment of said patient's cancer.

3. The method of claim 2, wherein, the modified cell surface receptors of therapeutic benefit are chimeric antigen receptors (CARs).

4. The method of claim 1, wherein the sample is obtained by apheresis

5. The method of claim 1, wherein the sample is obtained by leukapheresis.

6. The method of claim 1, wherein the platelets in the enriched product of paragraph a)ii) are depleted by at least 80% compared to the sample and/or there are no more than 5 platelets per leukocyte in the enriched product.

7. The method of claim 1, wherein, the genetically engineered T cells are collected by transferring them into a pharmaceutical composition for administration to a patient.

8. The method of claim 7, wherein cells are not frozen before being collected.

9. A method of treating a patient for cancer comprising administering to said patient genetically engineered T cells prepared by a method comprising the steps of:
   a) purifying T cells from a sample comprising leukocytes and platelets, wherein the leukocytes comprise T cells and wherein the T cells are purified by:
      i) performing a size based separation using a microfluidic device to produce an enriched product in which, compared to the sample, the percentage cells that are platelets has been reduced; and
      ii) in addition to the size based separation, performing an affinity based separation;
   b) after the purification of step a), activating and expanding the T cells to produce a composition in which the percentage of T cells that are central memory T cells has increased compared to the percentage of T cells that are central memory T cells in the sample;